CLAIMS

I claim:

1. [[previously presented]] (presently amended) A multifunction data port with multiple interfaces [[apparatus]] connected between a [[communications]] digital services network, including the Internet and/or an intranet, and a utility user's household, said data port [[interface]] comprising:

    a) a utility meter interface for measuring recording, and reporting in said digital services network utility usage in said household of a utility delivered to said household, said utility meter interface located in [[having]] a housing for said data port and coupled to a meter;

    b) a computer disposed within said utility meter and/or data port housing and [[connected to said utility meter, said computer]] providing a household interface between said[[communication]] digital services network and [[a]] devices located internal to said utility user's household and able to process information received [[over]] in said [[communications]] digital services network for use in said devices;

    (c) a network interface in said computer within said multifunction data port able to process data exchanged at broadband rates with the Internet. and digital communication networks; and

    (d) said computer in said data port able to process voice signals in said digital services network and from said utility user's said internal devices.

2. [[original]] (presently amended) A multifunction data port [[interface]] apparatus as cited in claim 1, wherein said device comprises a communications device or router that is [[and said computer is]] adapted to communicate with a multiplicity of said communication and electronic devices located within said utility user's structure.

3. [[original]] (presently amended) A multifunction data port [[interface]] apparatus [[as recited in claim 2, wherein said]] with multiple interfaces connected between a digital services network and a utility user's household and coupled to a utility meter, said data port comprising a computer which includes [[a voice processor and said communications network includes telephone lines, said voice processor being adapted for transmitting and receiving voice and data information within said utility user's stricture]] attendant electronics comprising

(a)   a voice/data processor able to process, store, and retrieve voice and digital data information in a digital services network and said digital services network includes telephone lines, said voice processor being adapted to transmitting and receiving voice and data information within said utility user's structure;

(b)   a network interface able to process data exchanged with the Internet and digital communication networks;

(c)   a video processor able to process, store and retrieve video digital data and signals and means for scrambling and de-scrambling, modulating and demodulating of said data;

(d)   a router to communicate with devices in said household and with the utility and digital service providers;

{e] ' ` and a computer to store and process data from the said utility meter and network interfaces and to access and communicate with said meter and network.

4. [[original]] (presently amended) A multifunction data port interface apparatus as recited in claims 1and 3, wherein said means of communication to and in the Internet or said digital services network is selected from any or all of the [[group]] transmission media and equipment and instruments consisting of fiber optic cable, a coaxial cable, a twisted pair cable, electric power lines, and wireless transmission media.

5. [[original]] (presently amended) A multifunction data port and interface apparatus as recited in claims 1and 3, wherein said computer further comprises a data storage device operable to store information received from said communication network for use in said household.

6. [[original]] (presently amended) A multifunction data port [[interface]] apparatus as recited in claim 5, wherein said computer includes back-up power supply and means for detecting a power outage and said device comprises a telephone, said data storage device being adapted for storing digitized voice messages generated by a utility company and received by said data port apparatus [[interface]], and said computer being adapted to retrieve said

stored digitized voice messages from said data storage device and communicating said retrieved data to said

telephone when said computer detects a power outage, <u>and simultaneous accesses said back-up power supply</u>.

7. [[previously presented]] (<u>presently amended</u>) A <u>multifunction</u> data port interface apparatus as recited in claim [[5]] <u>6</u>,

wherein said computer includes means for detecting a power outage and, <u>coupled to attendant electronics as recited</u>

<u>in claim 3, the</u> means for detecting a satellite identified location, and wherein said computer is adapted to

communicate with a utility company through said [[communication]] digital<u> services</u> network <u>with said satellite</u>

<u>identified location</u> to thereby inform said utility company of the location at the time of an emergency condition [[.]]<u>,</u>

<u>comprising the steps of</u>

(a) <u>said computer in said data port being programmed to alert the utility in times of emergency condition</u>

<u>and/or outage;</u>

(b) <u>to thence alert said utility of an exact geographical physical position of said household as well as a street</u>

<u>address of said household experiencing said emergency condition and/or outage.</u>

8. [[original]] (<u>presently amended</u>) A <u>multifunction</u> data port [[interface]] apparatus [[as recited in claim 5,

wherein]] <u>with multiple interfaces and attendant electronics including a computer and router, coupled to an</u>

<u>electric meter, and connected between a digital services network and a utility user's household or</u>

<u>commercial structure and</u>

(a) said computer further comprises a video processor for receiving video information from said

[[communications]] digital services network,

(b) <u>said computer comprises a storage device for storing digital information and data; and</u>

{c} _said computer <u>is</u> operable to store received video information on said storage device and to

retrieve said stored video information for delivery to said utility user's structure.

9.   [[original]] (presently amended) A multifunction data port [[interface]] apparatus [[as recited in claim 5, wherein]] coupled to a utility meter, said [[utility meter]] data port comprises an interface for recording and reporting data from said electric power meter and said data port device [[comprises]] is also coupled to a home located electronic device or appliance [[selected from the group]] consisting of an air conditioner, a heater, and hot water heater, or other such electric and electronic devices located in a utility user's home, said computer being programmed to modify the thermostat settings, or reduce or turn off power for at least one of said home devices as a function of changes in the cost or availability of electric power as determined by the utility company and acted upon remotely by either said utility company or said utility user.

10   [[original]] (presently amended) A multifunction data port interface apparatus as recited in claim 5, wherein said device is [[selected from the group consisting of]] connected to a thermostat, a television, a computer and a telephone, said computer and thermostat being adapted to receive utility messages generated by a utility company and transmitted and received by said data port interface and [[said]] communicating said messages to said thermostat, television, computer or telephone.

11   .[[previously presented]] (presently amended) A method of conducting secure[[d]] financial transactions and other transactions optimized by a secure computing environment comprising the step of using a multi function data port interface apparatus [[of claims 1]] as a secure data port terminal over a digital services [[communications]] network, and comprising the further steps of::

1.   the utility user initiating a secure [[d]] transaction from said data port

terminal through his or her keyboard or other device;

2.   transmitting from said data port an encrypted or scrambled [[a]] data port serial number corresponding to [[data port]] transaction data, also encrypted, as part of said initiated secure[[d]] transaction or message to a financial institution [[over]] in said communications network;

3.   associating said data port serial number with a unique initial encryption key number; and

4.   verifying the identity of said data port, while simultaneously decrypting the said transaction

message

12. [[previously presented]] (presently amended) A method of conducting a secure [[d]] purchase or other secure

transaction according to claim 11, comprising the step of using the said secure data port interface apparatus[[of

claims 1]] as a secure data port terminal over the Internet or other digital services network, comprising the further

steps of:

1.   initiating a secure[[d]] transaction from said data port terminal;

2.   transmitting encrypted or scrambled identification information [[for]] from a credit or debit card

[[over]] in the Internet to a vendor 630;

3.   verifying whether said encrypted credit or debit card number, representing said user's account is

sufficiently funded; and

4.   verifying whether said secure [[d]] transaction was initiated from said data port terminal.

13.   [[original]] (presently amended) The method of claim 12, further comprising the step(s) of determining

whether said vendor is not trustworthy, so as to determine

  (a)   evidence of fraud from Federal Trade Commission or other Court actions.

  (b)   vendor has poor credit rating or is in bankruptcy

  {c}   vendor has a record of disputed claims for credit or debit card transactions.

14. [[previously presented]] (presently amended) A method for conducting secure computing, comprising the

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step of locating a computer with network and house interfaces in a container protected by a seal for said data port coupled to a utility meter [[sealing the data port interface apparatus of claim 1]], said data port connected between a digital service provider or utility via a digital services communication[s] network and a utility user's structure, and the further steps of:

(a)   having said user install a device for inputting and receiving data within the utility user's structure coupled to said multifunction data port apparatus;

(b)   transmitting and receiving said data from said device within said structure to and from the said sealed data port interface apparatus connected between said digital service provider or utility via said [[a communications]] digital services network and said device in utility user's structure;

(c)   means for detecting whether any breaches in or movement of said sealed container for said data port interface apparatus have occurred and informing by alarm or otherwise said utility and said user; and

[[a]] (d) transmitting said data from said data port interface apparatus to said utility and/or digital service provider only if no breaches are detected.

15. [[previously presented]] (presently amended) The method of claim 14, wherein said data transmitted by or received from said interface is used for [[inputting step comprises]] Internet browsing or for financial transactions or other transactions the security and safety of which are optimized by a secure computing environment.

16. [[previously presented]] (presently amended) The method of claim 14, wherein said data transmitted by or received from said interface is used for [[inputting step comprises]] telecommunication and includes wireless cellular and local telephone service.

17. [[previously presented]] (presently amended) The method of claim 14, wherein said data transmitted by or received from said interface is used for [[inputting step comprises]] video communication, games and multimedia.

18. (previously presented)   The method of claim 14 wherein step (b) comprises wireless transmission.

19. [[previously presented]] (presently amended) A multifunction data port with multiple interface apparatus [[as recited in claim 1]] and computer-router further comprising a de-scrambler and encryption device disposed in said [[utility meter]] multifunction data port housing and made part of said data port and comprising

a) network interface in said computer able to process data exchanged at broadband rates with the Internet. and digital services networks;

(b)   a computer disposed within said multifunction data port housing providing a household interface between said communication network and electric and electronic devices located internal to said utility user's household and able to. process information received over said digital services network for use in said device;

(c)   a utility meter interface reporting utility usage in said household;

(d)   said scrambler or encryption device can receive keys from said computer to encode, decode and   scramble data transmitted or received by said multifunction data port in a digital services network or the Internet.

20. [[previously presented]] (presently amended) A multifunction data port [interface] apparatus [as recited in claim 1, further] comprising a router disposed in said multifunction data port [utility meter] housing and made part of said data port, and comprising

(a) a network interface in said computer able to process data exchanged at broadband rates with the Internet. and digital communication networks;

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(b)   a computer disposed within said multifunction data port housing providing a household interface between said communication network and devices located internal to said utility user's household and able to process information sent and received in said communications network for use in said devices;

(c)   a utility meter interface for recording and reporting utility usage in said household; and

d)   said computer is able to function as a said digital router in the Internet, an intranet or other digital services network.

21. [[previously presented]] (presently amended) A multifunction data port [[interface]] apparatus as recited in claim [[1]] 19, wherein said [[communications]] digital services network comprises a wireless network.

22   (new)   A method to provide secure communications using a multifunction data port that provides an interface between a digital network and residential or commercial electronics in a sealed location coupled or connected to an electric meter and using a computer controlled device to scramble and encode digital signals, comprising the steps of

(a)   a utility user or customer initiating a transaction utilizing devices within said user's structure coupled or connected to said data port;

(b)   said transaction made secure by being connected to, and transmitted and received on, a multifunction data port terminal coupled to a utility meter thence connected to a digital services network;

(c)   said data port having a registration number known to and registered with terminals in financial or other secure institutions at the behest of the data port user and utility customer.

23. (new) A method as recited in claim 22 whereby the said data port serves as a secure terminal monitoring the security of the utility user's computing environment and acting as a physical firewall resistant to tampering by virtue of said data port's location near electric wires, and in one embodiment in a sealed location in order to create a more secure computing environment for the utility user connected to said terminal.

24. (new) A method to use a multifunction secure data port that provides an interface between a digital network and residential or commercial electronics in a sealed secure location coupled or connected to a utility meter and using a computer and a computer controlled device contained in said data port with digital memory to scramble and encode digital signals, comprising the step of sub-metering electric power and the step of providing computer services and Internet access in a digital services network to residential and commercial structures, and further comprising the steps of:

(a) having the multifunction data port serve as a master data port to sub-metered data ports attached to or in utility meter housings of each utility user in a residential or commercial structure or structures;

(b) providing sub-metering of electrical or other utility services to said sub-metered data ports and thence to said users and also telecommunications, Internet, cable TV, video games, and other services to said utility users through said sub-metered multifunction data ports via said master data port.

25 (new) A method according to claim 24 wherein said multiple data ports comprise means of being networked with the said master data port in order to create a grid computing network thus leveraging the total computing power of said data ports.

<u>26</u> <u>(new)</u> <u>A method, according to claim 24, wherein the said secure multifunction data port and sub-metered data ports can be individually or collectively connected, and networked, and employed in such a manner by wire line or wireless connection and access, comprising the steps of</u>

<u>(a) allowing the monitoring of the movements and conditions of users restricted to their homes or other quarters by legal action or other circumstances including medical disabilities,</u>

<u>(b) providing said users with monitoring devices or cameras, connected by wireless or wire line, said devices attached to said users and connected to said data port for the purpose of said monitoring.</u>

27. <u>(new)) A method according to claim 24 wherein further steps for the use of said master data port and said sub metered data ports, individually and collectively, to include using said data ports to monitor the electric gird of said utility, comprising the steps of</u>

<u>(a) programming and storing fast Fourier transform algorithms in the memory of said data port by said utility;</u>

<u>(b) programming said data port by the utility and thereby instructing said data port to use said fast Fourier transform algorithms to measure and record the harmonics in the electric power used by each utility user connected to said data port ;</u>

<u>(c) programming by said utility of each said data port of said utility users' said utility meters, individually and collectively, to measure the phase difference between the current and voltage;</u>

<u>(d) using said phase difference to calculate the reactive power in the electric power used by each said utility user connected to said data port; and</u>

<u>(e) providing to said utility , on demand from said utility, transmitted from said data port coupled to said meter and to said utility, in said digital services network, the harmonic content and the reactive power in the electric power used by each utility user connected to said data port as calculated by said data port via said programming by said utility of each said utility user in order to report on and reduce said harmonic noise and correct said power factors by said utility.</u>

28. (new)) A method to use a multifunction secure data port that provides an interface between a digital network and residential or commercial electronics in a sealed secure location coupled or connected to a utility meter and using a computer controlled device contained in said data port with digital memory to scramble and encode digital signals, comprising the step of providing computer services and Internet access in a digital services network to residential and commercial structures, and further compri! sing the steps using said secure data port for census taking and for poling and voting, and for any similar government sanctioned function of and by said utility users connected to said data port, further comprising the steps of

(a) the utility user initiating a secure transaction from said data port through a keyboard or other device;

(b) having each said utility user register said secure encrypted data port, coupled to each said user's utility meter, in order to receive queries and transmit answers regarding census, poling and voting information;

(c) having the census bureau and other governmental agencies, individually and collectively, send requests for each adult resident in said utility user's premises using said data port and said utility meter to establish each said adult resident's own encrypted electronic signature;

(d) having each head of said household respond electronically to questions authorized by said governmental agencies after said steps (a), (b) and (c) are accomplished;

(e) providing through said data port that adult citizens in said utility users premises with proper encrypted identification secured through said encrypted electronic signature can register to vote in governmental elections through said data port by

(1) requesting from said government agencies an encrypted ballot for use in voting in an election accessing said data port through a key board or other device, and

(2) marking and sending by said utility user said encrypted ballot through said voting process in said digital services network to said governmental agencies.

29. (new) A method to use a multifunction secure data port that provides an interface between a digital network and residential, governmental, or commercial electronics in a sealed secure location coupled or connected to a utility meter and using a computer controlled device contained in said data port with digital memory to scramble and encode digital signals, comprising the step of providing computer services and Internet access in a digital services network, by wire line and wireless means provided with back up electric power source, to residential, governmental and commercial structures using electric power, and further comprising the steps using said secure data port for emergency communications and for public safety, and for any similar government sanctioned function, individually and collectively, of and by said utility users connected to said data port, further comprising the steps of

(a) having public and private agencies including police, hospitals, fire departments, utilities and agencies of government which use electric power employ said secure encrypted feature of said data port connected to said utility meters of each said private and public agency establish an emergency communication network between all said coupled and connected secure data ports coupled to or connected to any structure and

(b) having said private and public agencies use said encrypted data ports for communications in emergency situations and for public safety, and employ said back up power sources when necessary to communicate with public safety agencies and with said utility user's and occupants of said utility users premises in times of power outages, natural disasters and public calamities; and

(c) having said encrypted data ports employ said wireless access features coupled to said back up power sources when power and communication lines are down and disabled

30 .(new) A method according to claim 28 wherein said secure data port is used for testing and job training of utility users and occupants, individually and collectively, of said utility user's premises by private and pubic agencies, individually and collectively, connected to said data port, and comprising the steps of

(a) the utility user initiating a secure transaction from said data port through a keyboard or other device;

(b)   having occupants of said utility user's premises use said encrypted secure data port to establish their own unique encrypted electronic signature;.

(c)   approving said occupants for home training and testing by said agencies using said encrypted signature;

(d)   communicating with said occupants by training and teaching said utility users and occupants, individually and collectively, of said utility user's premises, using said encrypted data port by said agencies.

31.   (new) A method according to claim 28 wherein said private and public agencies can transmit and receive non-encrypted digital data for training, teaching, public information or public safety and other communications, in said data port , comprised of the steps of transmitting and receiving said data

(a)   to and from said utility user's premises for use by said utility users and occupants of said utility user's premises, individually and collectively;

(b)   by said public and private agencies, individually and collectively, and

(c)   accessing said data by a utility user or said pubic and private agencies remotely in the Internet or said digital services network after it has been transmitted or received by said data port.